

Vacuum Electrolyte Filling Standing Pre Sealing Integrated Machine For Batteries And Capacitors

Item Number: RB32



Introduction

Vacuum electrolyte filling standing and pre sealing integrated machine for batteries and capacitors delivers precise dosing consistent absorption adjustable heat sealing and reliable laboratory production with PLC touchscreen control corrosion resistant construction and flexible process parameters for advanced cell research

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Application	Description	Key Benefit
Lithium Battery Cell Development	Performs vacuum electrolyte filling, standing, and thermal pre-sealing for pouch-style or other compatible battery cells within the specified size range.	Integrates critical process steps while improving filling consistency and reducing manual transfers.
Capacitor Manufacturing	Supports controlled electrolyte delivery and pre-sealing during capacitor development and production processes.	Provides adjustable dosing and sealing parameters for different capacitor formats.
Battery Materials Research	Enables repeatable electrolyte filling experiments for research teams comparing cell designs, electrolyte quantities, or standing conditions.	Offers controlled process parameters and $\pm 1\%$ filling accuracy for more consistent experimental results.
Pouch Cell Pilot Production	Processes cells up to 190 mm in length and width, with sealing temperatures from room temperature to 250°C.	Supports flexible pilot-scale workflows without requiring separate filling and pre-sealing systems.
Glove Box Cell Assembly	Operates inside a glove box for processes requiring controlled environmental conditions during electrolyte handling.	Helps maintain a suitable dry processing environment while consolidating multiple operations.
Dry Room Manufacturing	Provides integrated electrolyte filling and pre-sealing for battery or capacitor work conducted in a dry room.	Combines corrosion-resistant construction with automated control for reliable routine operation.
Process Parameter Optimization	Allows users to adjust filling speed, sealing pressure, sealing temperature, and sealing time during development work.	Makes it easier to adapt the process to different materials, cell sizes, and production requirements.

Category	Parameter	Specification
Product Identification	Product Item Number	RB32
Process Functions	Integrated functions	Electrolyte filling, standing, and thermal pre-sealing
Compatible Products	Battery and capacitor dimensions	Length: 20-190 mm; Width: 20-190 mm; Thickness: 0-15 mm
Filling System	Electrolyte capacity range	0.2 ml-3 L, adjustable according to the filling pump
Filling System	Cell electrolyte filling quantity	0.2 g-3 kg, adjustable according to the filling pump
Filling System	Filling accuracy	$\pm 1\%$
Filling System	Dispensing speed	Up to 6 ml/s, adjustable
Fluid Connections	Inlet and outlet piping	$\Phi 6$ tube
Fluid Connections	Hose construction	Chemically resistant hoses
Vacuum System	Vacuum chamber construction	Aluminum welded construction; corrosion-resistant and structurally stable

Category	Parameter	Specification
Materials	Key component materials	304 and 316 corrosion-resistant stainless steel
Thermal Sealing	Sealing head material	Copper
Thermal Sealing	Sealing head temperature	Room temperature-250°C, adjustable
Thermal Sealing	Temperature control accuracy	±2°C
Thermal Sealing	Heat-sealing pressure	0-5 kg/cm ² , adjustable
Thermal Sealing	Heat-sealing time	0-99 seconds, adjustable
Thermal Sealing	Sealing edge width	5 ± 0.4 mm; customizable according to customer requirements
Thermal Sealing	Maximum sealing dimension	190 mm
Thermal Sealing	Sealing blade length	200 mm
Thermal Sealing	Sealing thickness precision	Thickness difference between any two sealing points: <15 μm
Heating System	Heating element	300 W heating tube
Heating System	Approximate heating power consumption	Approximately 0.6 kW during heating
Controls	Control system	PLC with touchscreen operation
Controls	Process operation	Flexible parameter setting and automated programming
Installation	Operating environment	Suitable for operation in a glove box or dry room
Dimensions	External dimensions	L600 mm × W620 mm × H800 mm
Electrical	Power supply	AC220 V / 50 Hz / 1 kW
Weight	Net weight	95 kg